

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
PATENT EXAMINING OPERATION

Applicants: Leonard R. Bayer, Andrew P. Jeavons, and David G. Bakken

Serial No.: 09/882,203 Confirmation No. 8016

Filed: June 15, 2001

For: SYSTEM AND METHOD FOR CONDUCTING PRODUCT  
CONFIGURATION RESEARCH OVER A COMPUTER-BASED  
NETWORK

Examiner: McAllister, Steven B. Art Unit: 3627

Atty Docket: HAR-003

**DECLARATION UNDER 37 C.F.R. 1.131**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

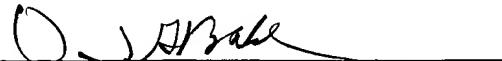
Dear Sir:

David G. Bakken declares that he is one of the inventors of the above-identified application, and that the invention of the application was conceived in the U.S. before the May 10, 2001 effective date of U.S. Patent Application No. 09/874,853 as set by such Application's claim to benefit of U.S. Provisional Application No. 60/290,131, filed May 10, 2001. Enclosed is a copy of a summary document entitled "Increasing the Value of Choice-based Conjoint with "Build your own" Configuration Questions" that I prepared in February 2001 for a conference to be held during the fall of 2001. The document was based on my work with Leonard R. Bayer, another inventor of the application, who reviewed the document soon after it was prepared. The document sets forth our invention in collecting individual-level product configuration data for analysis utilizing a follow-up question in a fashion following the "build your own" product section features used by web marketers. As set forth under the document's section "How it Works", a respondent configures the features and levels back and forth until he or she arrives at an acceptable configuration and total price. The invention resulted in the configurator program of the present Application No. 09/882,203. The enclosed document thus shows conception of the invention of the present Application No. 09/882,203 prior to the effective date of U.S. Patent Application No. 09/874,853, which was filed with due diligence to the June 15, 2001 filing date of the present Application No. 09/882,203.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and, further, that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

Date: 20 June 2005



David G. Bakken

## **Increasing the Value of Choice-based Conjoint with “Build your own” Configuration Questions**



**David G. Bakken, Ph.D.**  
**Senior Vice President**

**Len Bayer**  
**Executive Vice President and Chief Scientist**  
**Harris Interactive**

### ***Overview***

Utility estimates from choice-based conjoint analysis are derived from customer response to predefined product or service configurations. Using these utility estimates or part-worths, we can predict, with a market simulator, the share of preference that any combination of the possible feature levels will attain. While this has proven extremely valuable to marketers, CBC does not directly answer the question, “What features would customers pick if they could configure their own product?”

TURF analysis and BUNDOPT are two approaches for answering this question. One limitation of these approaches is the lack of information about price sensitivity for the different features or attributes. In this paper, we demonstrate a third approach that capitalizes on web-based (or CAPI) survey administration. Taking as our model the “build your own” product selection features of web marketers such as Dell Computer, we describe a technique for collecting individual-level product configuration data in conjunction with a choice experiment.

### ***Advantages of the Build Your Own Question***

In many cases, marketers would like to have volume information for specific attribute levels for production planning purposes, especially if they plan to offer more than one configuration. We describe a few such applications of the build your own question. In one instance, a manufacturer needed more precise information about demand for certain components, for production planning purposes.

The build your own question can also serve as an individual-level holdout task, for purposes of validating the model. This question might also be used to break “ties” between features or levels with very similar part worths.

The build your own question may prove especially valuable with partial profile designs, because it offers the respondent one opportunity to make a choice based on the entire set of attributes. We expect to have completed at least one study combining a partial profile design with this type of question before the conference.

### ***How It Works***

After a respondent completes the choice experiment, a follow-up question presents the same attributes, one at a time, and asks for the most preferred level. Each level has a

price attached (which may or may not be revealed), and the screen displays a “total price” based on the specific features selected so far. The respondent can move back and forth between the attributes until he or she arrives at a configuration and price that is acceptable. We will demonstrate our user-interface and describe other ways of implementing this type of question.

### ***Case Studies***

We describe two studies using the build your own question and demonstrate different ways of analyzing the data, including simple counting and hierarchical “contingency” analysis (for example, taking the most preferred level of the most important attribute and displaying the frequencies with which it is combined with specific levels of other attributes. One study is a full profile CBC design; the other study will be a partial profile design.

We conclude the paper by summarizing the benefits of including a build your own question. These include the technical benefits (e.g., individual level holdouts) as well as managerial benefits.